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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PHAM, TAMMY T

ART UNIT

PAPER NUMBER

2629

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/508,916	<b>Applicant(s)</b> MCCREARY ET AL.	
	<b>Examiner</b> TAMMY PHAM	<b>Art Unit</b> 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 January 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10-13 and 36-38 is/are pending in the application.
- 4a) Of the above claim(s) 36-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5 August 2008 has been entered.

### ***Response to Amendment***

2. Claims 1-9, 14-35, has been cancelled. Claims 36-38 have been added. Claims 10-13, 26-38 are pending. Claims 10-13 are considered below.

### ***Response to Arguments***

3. Applicant's arguments submitted on 8 January 2009 have been considered but are moot in view of the new ground(s) of rejection.

### ***Election of Species & Restriction***

4. Newly submitted claims 36-38 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

5. **In regards to newly added claim 36**, this pertains to four triangular zones, which Applicant has previously chosen not to elect in response to the “*Requirement for Restriction*” of 9 December 2008 (Group II).

6. **In regards to newly added claim 37**, this pertains to the non-shared vertexes of the triangular zones, which Applicant has previously chosen not to elect in response to the “*Requirement for Restriction*” of 3 September 2008 (Group I).

7. **In regards to newly added claim 38**, this pertains having each of the light emitting elements aimed at a midpoint, which Applicant has previously chosen not to elect in response to the “*Requirement for Restriction*” of 3 September 2008 (Group III).

8. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 36-38 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

*§ 103 Rejection*

9. **In regards to independent claim 10**, Applicant submits that the amended claim language overcomes the art since “*Sherbeck does not teach ‘each triangular zone being defined by a light emitting receiving element and a plurality of light receiving elements,’ as recited in amended Claim 10. Just the opposite, Sherbeck teaches triangular zones defined by a single light emitter (one of LEDs D0-D3) and an array of light detectors (one of arrays Tr and Tl). (col. 2, lines 22-37; Figure 1) (Remarks 13).*” This is not persuasive.

10. The term “*triangular zones*” still remains broad. The claims, as currently stated, does not define or describe “*triangular zones*” in any way that prohibits an arbitrary definition of “*triangular zones*.” Although Sherbeck may explicitly define four zones (Fig. 1), one skilled in the art may view one “*triangular zone*” as defined by the Applicant to consist of the first and

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second zone of Sherbeck. In other words, because the claim language does not define "*triangular zones*," the term remains broad enough to assign arbitrary triangular zones within the teachings of Sherbeck. Hence, Sherbeck continues to read upon the claim language as currently stated.

11. In other words, Applicant seems to imply that because Sherbeck teaches of a plurality of light receiving elements and a plurality of light emitting elements, this teaches away from the claimed limitations that the zones are defined by a single light receiving element and a plurality of light emitting elements (Remarks 5). This is not persuasive. The claim language remains broad and does not limit that the apparatus must only contain a single light receiving element, instead the claim teaches that the triangular zones are "*defined*" by a single light receiving element. The claims fail to define, describe, or explain just how the zones are "*defined*" by the light receiving elements hence Examiner will take the broadest interpretation possible. In this case, Sherbeck teaches that the triangular zones (Fig. 1, item "first zone") is defined by a single light receiving element (Fig. 1, item Trn) and a plurality of light emitting elements (Fig. 1, item D0-D1). Because Applicant has not explained how the zones are defined by the various elements, Examiner will assume that where the light emitting or receiving elements are in a line, which is on the same plane as one of the vertexes of the triangular, the light emitting or receiving elements will then help "*define*" the triangular zone. In this case, the three vertexes of the triangular are on the same plane as the single light receiving element (Fig. 1, item Trn) and the plurality of light emitting elements (Fig. 1, item D0-D1).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by Sherbeck (US Patent No: 4,703,316).

13. **In regards to independent claim 10**, Sherbeck teaches of a method of determining the location of a touch event within a display area (Fig. 1) surrounded by a touch frame having a plurality of light emitting elements (Fig. 1, item D0-D3) and a plurality of light receiving elements (Fig. 1, items TLN-TRN) forming a plurality of triangular zones of light beam paths, each triangular zone being defined by a single light receiving element (for example, the first zone is defined by Fig. 1, item TLN) and a plurality of light receiving elements (for example, the first zone is defined by Fig. 1, items D0-D1), the number and positioning of receivers being sufficient to form partially overlapping zone pairs such that the touch event lies within at least two zone pairs, the method comprising:

14. monitoring each of the zone pairs for blockage of at least one light beam path; and

15. upon such blockage, calculating the location of the touch event associated with the blockage based on the slopes and the end points of at least two intersecting blocked light beam paths from a first zone pair and two intersecting blocked light beam paths from a second zone pair (Fig. 1, column 4, lines 45-70).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherbeck (US Patent No: 4,703,316) in view of Casebolt (US Patent No: 5,355,149)

17. **As for claim 11**, Sherbeck fails to teach of randomly activate the light emitting elements, one at a time; and

18. monitor the output of each light receiving element associated with the activated light emitting element for an output indicative of a blocked light beam path.

19. Casebolt teaches of randomly activate the light emitting elements (Fig. 1, item 16), one at a time; and

20. monitor the output of each light receiving element (Fig. 1, item 18) associated with the activated light emitting element (Fig. 1, item 16) for an output indicative of a blocked light beam path (column 2, lines 55-60).

21. It would have been obvious to one with ordinary skill in the art at the time the invention was made to combine the random activation of Casebolt with the touch frame of Sherbeck. This combination provides a touch screen display that compensates for the effect of changes in

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ambient light, temperature, component aging and environmental variations without overdriving the light emitters (Casebolt, column 2, lines 33-37).

22. **As for claim 12**, Sherbeck as modified by Casebolt above in claim 11, teaches that the processor (Casebolt, Fig. 2, item 32) is further programmed to activate the light emitting elements (Casebolt, Fig. 1, item 16) at pseudo random intervals (Casebolt, column 2, lines 58-64).

23. **As for claim 13**, Sherbeck as modified by Casebolt above in claim 11, teaches that the processor (Casebolt, Fig. 2, item 32) is further programmed to activate the light emitting elements (Casebolt, Fig. 1, item 16) in a pseudo random sequence (Casebolt, column 2, lines 58-64).



*Conclusion*

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tammy Pham whose telephone number is (571) 272-7773. The examiner can normally be reached on 8:00-5:30 (Mon-Fri).

25. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

26. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TP  
6 February 2009

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